

*Issued by:***Cereal Disease Laboratory**

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Reports from this list as well as all Cereal Rust Bulletins are maintained on the CDL website (<http://www.ars.usda.gov/mwa/cdl/>)

For the original, detailed reports from our cooperators and CDL staff, please visit the [Cereal Rust Situation](#) (CRS) reports page on the [CDL website](#) or click the [CRS](#) links found throughout the bulletin.

- Wheat stem rust is present at low levels in susceptible winter wheat plots in Texas.
- Wheat leaf rust is light and scattered in the southern Plains and Gulf Coast.
- Wheat stripe rust is widespread in the Pacific Northwest.
- **Special Note:** Races with *Lr21* virulence detected in 2010 wheat leaf rust survey.

Extreme to exceptional drought conditions continue throughout much of the Southern Plains with abnormally dry to drought conditions from the Gulf Coast up the eastern seaboard through Virginia. (<http://www.drought.unl.edu/dm/monitor.html>).

Wheat stem rust. Wheat stem rust was found on McNair 701 in irrigated plots at Yoakum in southeastern Texas on April 15. No other plots in the nursery were infected with stem rust. Wheat stem rust was found in an irrigated McNair 701 plot at mid-dough at Castroville in south central Texas on April 18. The infection was not uniform as some tillers severity of up to 50S, but the majority had 0 to trace levels. Stem rust was not found in other plots in the nursery. At Uvalde in south central Texas, trace amounts of stem rust were found on McNair 701 plots on April 18.

Wheat leaf rust.

Texas –Wheat leaf rust was very active in irrigated plots at Yoakum in mid-April and could be found on flag leaves (see [CRS](#)). Wheat leaf rust was building in plots at Castroville in south central Texas in early April. Susceptible lines such as Jagger (*Lr17*), Jagalene (*Lr24*) and Bullet (*Lr39/41*) had severity of 70S on April 18. The plants were still fairly green and leaf rust will likely continue to develop in the nursery. At Uvalde on April 18, trace amounts of leaf rust were found in a few plots, but none higher than 10% severity. The plots were drying up due to lack of moisture. The persisting drought conditions may limit the spread and development of leaf rust in the state.

Oklahoma – There have been few reports of wheat leaf rust in the state (see [CRS](#)).

Kansas – Low levels of wheat leaf rust were found in wheat at the jointing stage in southeastern Kansas in early April. Low levels (<5% incidence) were found in the lower third of the canopy on known susceptible cultivars in Saline County in central Kansas the week of April 11 (see [CRS](#)).

Louisiana – Wheat leaf rust arrived late in the state and will likely cause little damage to commercial fields that are maturing ahead of schedule (see [CRS](#)). Leaf rust was still very active in susceptible plots at Baton Rouge and Winnsboro (northeastern Louisiana) in mid-April.



Mississippi – Low levels of wheat leaf rust were found in edges of a Croplan 8868 field (near boot stage) in northwestern Mississippi in late March. This was the first report of wheat leaf rust in Mississippi in 2011.

Georgia – Minor wheat leaf rust infections were found in susceptible plots at Plains in south central Georgia in mid-April. No leaf rust was found in surveys of several commercial fields in south central Georgia.

Arkansas – Wheat leaf rust is very light in the state with the exception of the earlier report of leaf rust in a 120 acre field of Jackpot in central Arkansas in mid-March.

Virginia – Traces of wheat leaf rust were found in plots in Warsaw on April 14. This is the first report of wheat leaf rust in Virginia in 2011.

California - Leaf rust was moderately severe on the cultivar Dirkwin in plots at Colusa in the Sacramento Valley in early April.

Washington – A single wheat leaf rust pustule was found on the cultivar Farnum in a field in southeastern Washington on April 15. In 2010, leaf rust was severe on Farnum in the same county.

Special Note: New races of wheat leaf rust with virulence to *Lr21* were detected for first time in North America in 2010. The leaf rust resistance gene *Lr21* was originally derived from the wild wheat relative *Triticum tauschii*. Virulence to this gene had not been detected in isolates of *Puccinia triticina* in North America in previous years. In 2010 in research plots in North Dakota and Minnesota the wheat cultivars Fallor, Glenn, and RB07 with *Lr21* had higher levels of leaf rust than in previous years. Wheat leaf rust races TFBGQ and TFBJQ – both virulent to seedling wheat plants with *Lr21*, were identified in the leaf rust collections from Minnesota and North Dakota. [For the complete report, please visit the CDL website.](#)

Wheat cultivar *Lr* gene postulation database. Please visit: [Leaf rust resistance gene postulation in current U.S. wheat cultivars.](#)

Wheat stripe rust.

Texas - Stripe rust was found in south central Texas plots on March 8, but by mid-April development and spread had ended.

Louisiana – Stripe rust developed around the state, but was not a significant problem for growers.

Mississippi – Stripe rust hot spots were detected in a commercial field of Croplan 8868 (near boot stage) in northwestern Mississippi in late March. Much lower levels were detected in a field of Dixie 427 two miles away. These were the first reports of stripe rust in Mississippi in 2011.

Arkansas – Stripe rust was the most prevalent wheat disease in the state in mid-April, but levels were low due a combination of dry, warm weather, effective resistance in many cultivars and fungicide use. It appears most stripe rust development is restricted to the fields where it overwintered.

Kentucky – Low levels of stripe rust were detected in a commercial field of Pioneer 25R35 (Feeke's 6 growth stage) in southwestern Kentucky in late March.

California – Above normal rainfall this year has been conducive for stripe rust development in the Sacramento Valley. Stripe rust was severe on some plots at heading at Colusa in early March. A commercial field of Joaquin (heading stage) in the same county had severe stripe rust (80% severity, 100% incidence) despite two fungicide applications applied too late for control. A severe natural stripe rust infection was



underway in the UC Davis Agronomy farm in mid-April (see [CRS](#)) and severity levels in plots was expected to increase the next 3-4 weeks. Spreader rows had 60-100% severities.

Idaho – Stripe rust was found in a row of the hard red winter wheat Moreland in southeastern Idaho in late March. The rust had overwintered, something uncommon in this area. Stripe rust was widely distributed in northern and southern Idaho in mid-April (see [CRS](#)). Cooler than normal temperatures since February slowed crop and rust development.

Washington – Stripe rust was found at low incidence on lower leaves in winter wheat fields in southeastern Washington in mid-April (see [CRS](#)). This is the earliest detection of stripe rust in the area in many years. Stripe rust was found in nearly every field checked in Adams and Franklin Counties in central Washington. Incidences ranged from 1 to 10% (except for one field with incidence greater than 30%) and the rust was appearing on some upper leaves. Many fields in central and south central Washington have been sprayed with fungicides.

Oregon – Stripe rust was widespread in western and northeastern Oregon in mid-April.

Stripe rust samples

Please send wheat and barley stripe rust collections (5 or more rusted green leaves) as soon as possible after collection to:

Dr. Xianming Chen
USDA-ARS
361 Johnson Hall
P.O. Box 646430
Washington State University
Pullman, WA 99164-6430
email: xianming@wsu.edu

Note: Stripe rust collections are vulnerable to heat and do not survive long at warm temperatures; therefore, if shipment of collections for race identification is delayed their viability will be greatly reduced. An overnight courier service is preferred for sending stripe rust collections.

Oat stem rust. Oat stem rust was found in a section of the Baton Rouge nursery containing exotic material in mid-April. The rust was fairly prevalent and very active. Trace amounts of oat stem rust were found in one plot in Castroville in south central Texas on April 18.

Oat Crown Rust. Oat crown rust was at low levels throughout susceptible plots in Baton Rouge, Louisiana in mid-April, but numerous infections were observed on Brooks borders and spreaders. Frequent heavy dews and high temperatures the past three weeks have been conducive for development. Oat crown rust found in irrigated plots in south central Texas on March 9 had spread and developed sufficient for rating oat cultivars and lines in mid-April. Trace amounts of oat crown rust were found in a few plots at Castroville on April 18, but only one early line was heavily infected (>50S).

Barley stem rust. Not yet reported in the U.S. this year.

Barley leaf rust. Not yet reported in the U.S. this year.

Barley stripe rust. Barley stripe rust was found in plots at the UC Davis Agronomy farm in mid-April.

Rye stem or leaf rust. Rye leaf rust was found on the rye cultivar Elbon in plots in southeastern Texas in mid-April.

